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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,696	11/20/2001	Clifford Mark Kelly	2000P09065 US01	7464

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EXAMINER

RIOS CUEVAS, ROBERTO JOSE

ART UNIT PAPER NUMBER

2836

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/992,696	<b>Applicant(s)</b> KELLY ET AL.	
	<b>Examiner</b> Roberto J Rios	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 29-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28, 47 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/02;4/02;11/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of invention I (claims 1-28, 47, and 48) in the Response to Restriction Requirement filed on 11/24/2003 is acknowledged. Claims 29-46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

### ***Claim Objections***

2. Claims 1 and 15 are objected to because the claims recite: "forming a magnetic circuit including **a** magnetically permeable element in said portable patient monitor device and **a** corresponding magnetically permeable element in said docking station". It is not clear if these magnetic permeable elements are the same magnetic permeable elements previously recited in the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 8-10, 15-18, 22-24 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onoda (US patent 5,284,151) in view of Hough (US patent 5,229,652) and Carter et al (US patent 6,659,947).

As per claims 1, 3, 15 and 17, Onoda teaches a portable patient monitor device/docking station using an electrically isolated, combined power and signal coupler

system, comprising: a power coupler comprising an inductive coil arrangement and an electrically isolated data transducer; wherein said portable patient monitor device is suitable for docking with said docking station (Figure 6) by, forming a magnetic circuit including an inductive coil arrangement in said portable patient monitor device and a corresponding inductive coil arrangement in said docking station, and coupling a data transducer in said portable patient monitor device to a corresponding transducer in said docking station to bi-directionally exchange data (Figure 1). Onoda does not specifically disclose the inductive coil arrangement comprising a magnetically permeable element including a first pole and a second pole; and a winding, forming an opening through which the first pole protrudes. However, Hough teaches an electrically isolated, combined power and signal coupler system, comprising: a power coupler comprising a magnetically permeable element including a first pole and a second pole; and a winding, forming an opening through which the first pole protrudes (Figures 4, 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's power coupler with Hough's power coupler arrangement for the purpose of providing electrical isolation to the patient from the circuitry.

Onoda teaches bi-directionally exchanging data between the portable patient monitor device and said docking station but does not specifically disclose supporting connection of said portable patient monitor device to a network through a network connection comprising at least one of: IP compatible, USB compatible, LAN compatible and IEEE compatible. However, Carter et al (herein after Carter) teach a portable

patient monitor device, wherein connection of said portable patient monitor device to a LAN network connection is supported throughout a medical facility (Figures 1, 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's data transducer arrangement with Carter's medical data network arrangement for the purpose of monitoring patient's physiological data throughout a medical facility.

As per claims 2, 16, Onoda teaches said bi-directionally exchanged data including patient monitor parameters derived by said portable patient monitor device and information for controlling a function of said portable patient connected device (col. 6, line 49+).

As per claims 4 and 18, Hough teaches the magnetically permeable element being a ferrite armature (col. 4, line 38).

As per claims 8 and 22, Hough teaches the winding being comprised of a printed circuit board that includes an opening through which the central pole of the magnetically permeable element protrudes (Figure 4).

As per claims 9 and 23, Hough teaches the printed circuit board being a multi-layer printed circuit board and the winding comprising a trace around the opening on each layer, connected by feed-throughs between adjacent layers to form a cylinder of traces (Figure 4; col. 5, line 21; col. 7, line 37).

As per claims 10 and 24, Hough teaches the winding comprising a plurality of cylinders of traces (Figure 4; col. 5, line 21; col. 7, line 37).

As per claim 47, Onoda teaches a portable patient monitor device/docking station using an electrically isolated, combined power and signal coupler system, comprising: a power coupler comprising an inductive coil arrangement and an electrically isolated data transducer; wherein said portable patient monitor device is suitable for docking with said docking station (Figure 6) by, forming a magnetic circuit including an inductive coil arrangement in said portable patient monitor device and a corresponding inductive coil arrangement in said docking station, and coupling a data transducer in said portable patient monitor device to a corresponding transducer in said docking station to bi-directionally exchange data (Figure 1). Onoda does not specifically disclose the inductive coil arrangement comprising a magnetically permeable element including a first pole and a second pole; and a winding, forming an opening through which the first pole protrudes. However, Hough teaches an electrically isolated, combined power and signal coupler system, comprising: a power coupler comprising a magnetically permeable element including a first pole and a second pole; and a winding, forming an opening through which the first pole protrudes (Figures 4, 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's power coupler with Hough's power coupler arrangement for the purpose of providing electrical isolation to the patient from the circuitry.

5. Claims 12-14 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onoda in view of Hough and Carter as applied to claims 1, 15 above, and further in view of Applicant's Admitted Prior Art (AAPA).

As per claims 12-14 and 26-28, Onoda teaches the electrically isolated data transducer but does not specifically disclose the electrically isolated data transducer being a radio-frequency data transducer comprising a shielded antenna. However, AAPA teaches that portable monitor devices comprise radio-frequency data transducer including an antenna (Background of the Invention, page 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's data transducer with AAPA's RF data transducer for the purpose of maintaining a data link throughout a medical facility.

AAPA teaches an antenna but does not specifically disclose said antenna being shielded. However, the Examiner takes official notice that it is well known to provide communication antennas with shielding means to reduce EMI effects and radiation effects to humans. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a shielding means in Brinkmann's antenna for the purpose of reducing EMI effects and radiation to humans.

6. Claims 5-7, 19-21, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onoda in view of Hough and Carter as applied to claims 1, 15 and 47 above, and further in view of Riffe et al (US patent 4,030,058).

As per claims 5 and 19, the combination of Onoda in view of Hough teaches the magnetic permeable element but does not specifically disclose a thin covering of non-magnetic nonconductive material (plastic). However, Riffe et al (herein after Riffe) teach a power inductive coupler comprising a split-transformer arrangement, wherein a

magnetic permeable element has a relatively thin covering of non-magnetic nonconductive material (col. 2, line 67+).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's power inductive coupler with Riffe's non-magnetic nonconductive material for the purpose of providing a desired air gap between the transformer cores.

As per claims 6, 20 and 48, Riffe teaches that the width of the air gap provided by the non-magnetic nonconductive material must be maintained at a value consistent with magnetic circuit design criteria of conventional transformers to minimize losses due to leakage reactance. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to select a specific air gap width as an engineering design choice to minimize losses due to leakage reactance.

As per claims 7 and 21, Riffe teaches a non-magnetic nonconductive material but does not specifically disclose plastic. However, the Examiner takes official notice that plastic is a non-magnetic nonconductive material well known in the art. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a thin covering of plastic in Onoda's power inductive coupler for the purpose of providing appropriate air gap between the transformer cores.

7. Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onoda in view of Hough and Carter as applied to claims 1 and 15 above, and further in view of Bui et al et al (US patent 6,398,727).



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As per claims 11 and 25, Onoda teaches the electrically isolated data transducer but does not specifically disclose the electrically isolated data transducer being an optical data transducer including at least one of a LED and a photo-transistor. However, Bui et al (herein after Bui) teach a portable patient monitor device comprising a data transducer comprising an IR coupling (col. 6, line 6).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Onoda's data transducer with Bui's IR data transducer for the purpose of providing continuous monitoring of patient physiological condition when said patient is carrying said monitoring device.

8. Art of general nature relating to inductive power coupling has been cited for applicant's review.

#### **Communication with PTO**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (571) 272-2056. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (571) 272-2800, ext. 36. The fax number for Before-Final communications and After-Final communications is (703) 872-9306.



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